

REMARKS

Rejection under 35 USC §103(a)

Claims 1-3, 6-16, 19-32, 34-45, 47-50, 52-55, 58-68, 71-83- 86-96, and 99

In the Office Action, Claims 1-3, 6-16, 19-32, 34-45, 47-50, 52-55, 58-68, 71-83- 86-96, and 99 are rejected under 35 USC §103(a) as being unpatentable over Motosyuku et al. (U.S. Patent No. 5,602,566) in view of Ball (U.S. Patent No. 5,686,942). No new matter has been introduced.

The examiner stated that Motosyuku controls the display by the rotational movement (tilt) instead of a translational movement. The examiner also stated that Ball teaches a system to generate input data to a computer comprising a camera housing in the display device, and generate input data to control a display based on the translational movement of the display relative to a reference target, noting that the translational movement of the display relative to a reference target is equivalent to the translational movement of the reference target relative to the display.

From the above, the examiner suggested that it would have been obvious to one having ordinary skill in the art at the time of the invention to use a camera housing in the display device, and generate input data to control a display based on the translational movement of the display relative to a reference target as taught by Ball in the device of Motosyuku so as to provide a simple and intuitive method to enter control data to the computer.

However, the applicant respectfully disagrees with the examiner's characterization of the quoted reference systems and the 35 U.S.C. 103(a) rejections.

First of all, the combination of the system taught by Ball with Motosyuku's device would not result in an equivalent system proposed by the present application. The function of Ball's computer input system was to make the location of a certain image (e.g. a cursor) within the picture correspond to the detected motion of a point object (e.g. the user's nose), as described at col 2, lines 36-38, col 3, lines 47-51 and col 7, lines 3-4, instead of adjusting the displayed portion of a virtual desktop in a manner related to the tracked movements of the display device. In the present application, the user is able to traverse the entire information content mapped to the virtual desktop and examine any certain portion or segment of the information content using the computer system's display device, not just display certain image (e.g. a cursor) within the picture that follows the detected motion of a point object (e.g. the user's nose) as proposed in Ball.

Secondly, the movement of the point object or a reference target presented in Ball (i.e., tip of a user's nose) is not translational, but pivotal (col 6, line 17-18) or rotational (around the user's neck). Even if the movement of the point object is assumed to be translational, the movement of a reference target (i.e. the nose) should be distinguished from the movement of the display itself. Even though the examiner noted that the translational movement of the display relative to a reference target is equivalent to the translational movement of the reference target relative to the display, moving the display device itself to the direction of the desired scrolling is more intuitive than and physically distinguishable from moving the reference target to the opposite direction (i.e., the equivalent relative direction). Also, the physical implementation of sensors or motion detectors (e.g. location) is different because of different moving parts.

For example, if a user who wants to scroll up the virtual desktop, he can move the display up according to the system proposed by the present application. On the other hand, the equivalent movement of the user without moving the display is to lower himself so that the relative movement of the display is upward. It is both counter intuitive and inconvenient. Even if the user arranges the control so that moving the reference target upward to display upper portion of the display content, the equivalent display movement relative to the reference target is downward in that case, which is the opposite direction of the display movement according to the proposed system of the present application. Therefore, the translational movement of the display relative to a reference target is not equivalent to the translational movement of the reference target relative to the display in practice and implementation.

Thirdly, the examiner suggested that Ball's computer system comprises a camera housing in the display device and generates input data to control a display based on the translational movement of the display relative to a reference target. Again, tracking the translational movements of the display device in the system under the present application should be distinguished from Ball's system with a camera housing in the display device to detect the movement of a reference target (e.g. the user's nose) based on the same argument as above.

Therefore, it would not have been obvious to one having ordinary skill in the art at the time of the invention combine the computer input system taught by Ball with the device of Motosyuku so as to provide simple and intuitive method to enter control data to the computer, because the function of Ball's system was different from that of the proposed system under the present application, and Ball's system is based on a pivotal or rotational movement, instead of the translational movement of the display according to the present application. Even if Ball's system is assumed to be based on translational movement, the translational movement of the

display relative to a reference target is not equivalent to the translational movement of the reference target relative to the display, as discussed above.

In addition, the following is a quotation of MPEP 706.02(j) regarding the criteria for a 35 U.S.C. 103 rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The applicant respectfully submits that there was no suggestion or motivation to modify or combine Ball's system with Motosyuku's device. The examiner suggested that it would have been obvious to one having ordinary skill in the art at the time of the invention to use a camera housing in the display device, and generate input data to control a display based on the translational movement of the display relative to a reference target as taught by Ball in the device of Motosyuku so as to provide simple and intuitive method to enter control data to the computer. However, considering that the function of Ball's system was to show a certain image (e.g. a cursor) to track the movement of a point object (e.g. a human nose), which is quite different from scrolling the virtual desktop to the direction of the movement of a display device (as proposed in the present application), it is not clear where a person having ordinary skill in the art would get the suggestion or motivation from to modify or combine Ball's system with Motosyuku's system (that uses rotational movement instead of the translational movement as proposed in the present application).

Regarding the examiner's Official Notice that it has been well known in the art to use coordinate input data of the input device (mouse, joystick, trackball, etc) to control the scrolling, zooming, and navigation in a display, the applicant respectfully submits that even if the notice were warranted, it does not affect the patentability of the present application because the applicant is not proposing to use the coordinate input data of input devices well known in the art (e.g. mouse, joystick, trackball, etc.) to control the scrolling, zooming, and navigation in a display.

The examiner also suggested that even though Motosyuku does not show a second computer, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to use the coordinate input data to control any computer since it merely depends on the hardware configuration of the system.

The following is a quotation of 35 U.S.C. 101 which forms the basis for patentability.

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The applicant respectfully disagrees with the examiner and submits that regarding a computer implemented method claim, a system using one computer to control a second computer should not be barred from the patentability just because it uses a coordinate input data. In the alternative, the applicant submits that dependent claims including a connection to a second computer should be allowed because they depend on allowable independent claims.

Therefore, the applicant respectfully requests that the claims are allowed.

Claims 4, 5, 33, 56, 57, 84 and 85

The examiner rejected claims 4, 5, 33, 56, 57, 84 and 85 under 35 USC §103(a) as being unpatentable over Motosyuku et al. (U.S. Patent No. 5,602,566) in view of Ball (U.S. Patent No. 5,686,942), as applied to claims 1, 33 above, and further in view of Kang (U.S. Patent No. 6,009,210).

The examiner suggested that Kang taught moving the image based on lingering deviation from the reference target so as to provide a device with simple and easy operation, and therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Motosyuku to enable moving the image based on lingering deviation from the reference target as taught by Kang so as to provide a device with simple and easy operation as suggested by Kang.

The rejected dependent claims add the act (e.g. a request by a user) of redefining the orientation of the certain portion displayed by the display device such that, without moving the display device, the certain portion displayed by the display device changes. In the quoted part (col. 8 lines 26-49), Kang suggests that when the system detects a lingering deviation from the reference pose (e.g. a user rotate one's head to the left and maintain that posture; and the system detects the same deviated face posture) longer than a preset time threshold (e.g., 2 seconds, etc), it continues to rotate the viewpoint of the virtual scene in the same manner (until the head posture changes). In contrast, the claims at issue do not involve moving an image based on any lingering deviation from the reference target as taught by Kang, but rather

involves an act of redefining the orientation of the display without moving the display device, such as a request by a user.

Thus, Kang's suggestion is distinguishable from the claims adding the act of redefining the orientation of the display in the computer implemented methods of the present application, because they describe different functions: 1) Kang's system describes a maintained deviation from a reference triggers the same continued response of the system, and 2) the claims at issue adds the act of redefining the orientation of the display without moving the display device.

Therefore, the applicant respectfully requests that the claims are allowed.

Claims 17, 18, 46, 51, 69, 70, 97, and 98

The examiner rejected claims 17, 18, 46, 51, 69, 70, 97, and 98 under 35 USC §103(a) as being unpatentable over Motosyuku et al. (U.S. Patent No. 5,602,566) in view of Ball (U.S. Patent No. 5,686,942), as applied to claims 1, 16, 45, 68, 96 above, and further in view of Detlef (U.S. Patent No. 6,178,403).

The examiner suggested that Detlef teaches a PDA having handwriting recognition capability and voice recognition capability for user entering data to the computer (col1 lines 24-40) and it would have been obvious to one having ordinary skill in the art at the time the invention was made to include handwriting recognition capability and voice recognition capability as taught by Detlef in the device of Motosyuku so as to enable the user to enter data to the computer without a keyboard as suggested by Detlef.

The applicant respectfully requests that the claims are allowed because the claims at issue are dependent claims based on allowable claims as discussed above.

CONCLUSION

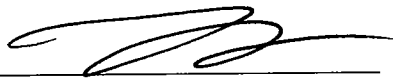
In view of the foregoing, the applicant submits that the claims pending in the application are in condition for allowance. A Notice of Allowance is therefore respectfully requested.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 838-4349.

If a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 59559-8009.US01 from which the undersigned is authorized to draw.

Respectfully submitted,

Dated October 25, 2007

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